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Monthly Statistical Report

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OCTOBER 1989

SUMMARY

The weakness displayed in the third quarter's deliveries decline continued in October, for which deliveries dropped 2.9 percent year-to-year. All major products contributed to the decrease.

The recent declines in deliveries, and the corresponding weakness in consumption, are partly the result of fuel switching and lagged effects of price increases earlier this year. However, economic growth, which according to current estimates slipped to 2.5 percent (quarter to quarter) in the July-September period from an average 4.4 percent last year, is believed to have continued to slacken more recently, further slowing petroleum consumption growth.

The largest decline in deliveries was for residual fuel oil, which fell 244 thousand B/D or more than 18 percent in a continuation of the fuel-switching-related reversal of the last several months. Gasoline deliveries slipped 0.3 percent for the month, following the third quarter's decline, a further indication of gasoline consumption's recent weakness. Deliveries for the "other oils" category also dropped, falling 4.0 percent.

Kerosine jet fuel deliveries, though falling 2.6 percent in October, did this after an unusually large increase the month before; data on air traffic indicates that actual consumption may even have been increasing slightly. For distillate deliveries as well, October's 0.7 percent decline contrasts with what appears to be a continued moderate growth trend in consumption. The decline coincided with weather significantly warmer than last October.

Overall, underlying consumption of petroleum products, even excluding residual fuel oil, appears to have continued the flatness estimated for the third quarter. This represents a shift from the upward trend in consumption (excluding residual fuel oil's swings) which had continued since the early 1980s.

Meanwhile, imports have continued to rise despite the weakness in deliveries. For the year to date, imports have risen by over 9 percent, in large part because of the accelerated drop in domestic crude oil production this year. The decline continued in October, with crude oil output falling more than 550 thousand B/D or nearly 7 percent from one year earlier.

Turnarounds slowed refinery operations in October, following September's higher-than-usual level of processing for that time of year. However, though declining seasonally from recent prior months' levels, input to distillation units was still 1.7 percent higher than for one year earlier. Distillate output rose 2.7 percent over last October, while distillate stocks declined 3 million barrels—an inventory pattern which has been typical in recent years. Typically, operations have been reduced as refineries undergo fall turnarounds in order to prepare for higher distillate production in November and December, while seasonal heating oil demand has already begun to pick up. Total inventories rose 3 million barrels, about average for the month.

PRODUCT SUPPLIED[1]

Gasoline

WEAKNESS CONTINUES. The third quarter's weakness in gasoline deliveries was maintained in October, with deliveries for the month declining 0.3 percent. This, along with the weakening indicated by data on miles traveled, suggest that underlying consumption has been flat or even declining in recent months.

Travel growth, which, in response to higher prices and slower economic growth, had slowed by a percentage point from last year's rate to around 2.5 percent by midsummer, seemed to show an uptick in August to about 3 percent. However, this was against year-ago levels which were unusually low for the month; we estimate an increase of 0.5 to 1 percent more accurately represents underlying travel growth for that month.

Travel more recently has likely continued to be weak. Because improvement in fuel efficiency of the overall fleet has continued as newer vehicles' efficiency continues to exceed that of those being replaced, this would indicate a small year-to-year decline in gasoline consumption in recent months.

	API ESTIMATES			
	OCTOBER		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	17.1	(2.9)	17.1	(0.2)
Crude production[2]	7.5	(6.9)	7.6	(6.4)
Total imports[2]	8.2	5.7	8.0	9.4
Stocks (million bbl)[2]	1,093	1.7	ns	ns

Distillates

WARMER WEATHER TRANSLATES INTO A DECLINE.

Distillate deliveries' decline in October was primarily the result of weather substantially milder than last October's cold snap. If the 0.7 percent decline were adjusted for weather more than 25 percent warmer than a year ago, this October's deliveries would have risen an estimated 2 to 3 percent. Consumption indicators, however, suggest underlying growth of about half that rate.

For the residential and commercial sectors, consumption is believed to have declined versus last October by perhaps 100 thousand B/D because of the warmer weather. On-highway usage is estimated to have been growing at only around 2 or 3 percent, in line with this year's slower economic growth, while industrial usage has likely grown less than that because of fuel switching opportunities in some cases.

Rail ton-miles continue to show small year-to-year declines, and the remaining sectors have also likely contributed little to distillate demand growth. Thus, it would appear that moderate consumption growth was more than counterbalanced in October by the effects of warmer weather and actual usage probably declined, year to year.

Residual Fuel Oil

ANOTHER SUBSTANTIAL DECREASE.

Residual fuel oil deliveries dropped substantially in October for the third month in a row, falling 18.2 percent versus a year ago. Fuel-switching to competitively-priced natural gas among electric utility and industrial users has continued to depress deliveries to these sectors. Domestic bunker deliveries, however, may have benefited from a price advantage versus foreign sources.

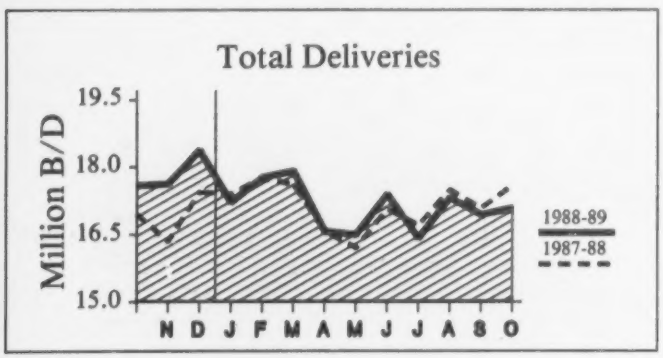
The most recent swings in residual fuel oil deliveries are typical of the pattern over the last several years, which have included annual increases and declines frequently in the double-digit range. However, these swings mask the fact that since 1983, annual residual fuel oil deliveries have remained in roughly the 1.2 to 1.4 million B/D range, with much of the year-to-year ups and downs attributable to fuel switching in the electric utility and industrial sectors. (Residual fuel oil usage had been as high as 3 million B/D in the late 1970s before higher oil prices induced long-term switching and conservation in many usage sectors.) Last year's deliveries had been near the upper end of that range, at 1.38 million B/D; the most recent deliveries data, if adjusted for normal seasonal variation, suggest that usage in the past several months has slid to near the bottom of that range.

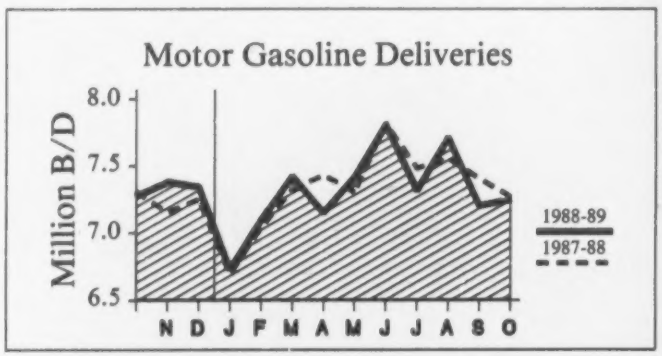
Kerosine Jet Fuel

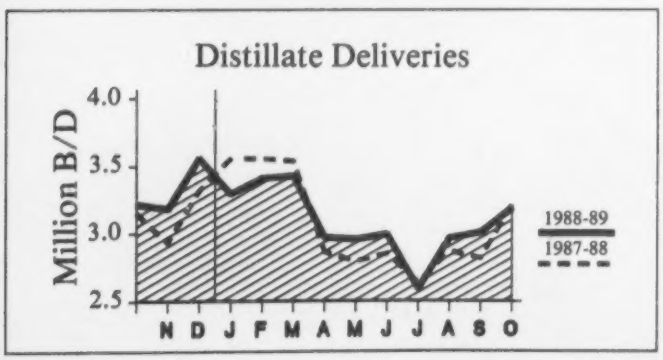
DECLINE FOLLOWS SEPTEMBER'S JUMP.

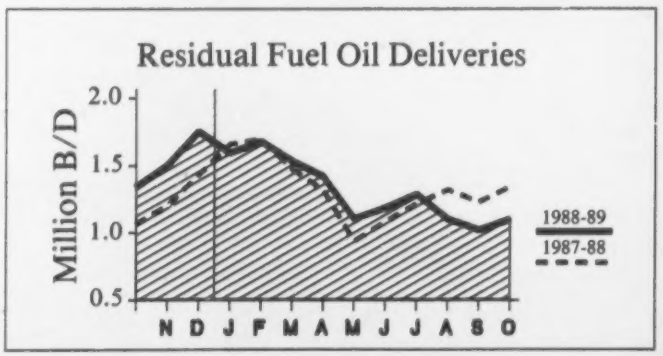
Following September's unusually large gain, October's kerosine jet fuel deliveries fell 2.6 percent. Despite fluctuations in deliveries such as these, changes in air traffic have been less volatile, if not necessarily of as large a magnitude as deliveries changes. Growth in miles flown had dropped off earlier this year, with little if any growth around mid-year. More recently, however, there appears to have been a slight recovery in traffic growth, with more recent increases perhaps in the 1 to 2 percent range.

Over a longer period, deliveries growth has nearly matched that of air traffic. Miles flown by the commercial fleet have risen an estimated 1.5 percent for the year to date, while deliveries have risen about 2 percent.









Other Oils

DELIVERIES FALL AGAIN. Deliveries of other oils fell an estimated 4.0 percent versus last October, continuing the pattern of declines of the last several months.

Demand for petrochemical feedstocks continues to be weaker, and operational problems at some plants have no doubt contributed as well. Ethane deliveries had been on the decline for much of this year due to relative feedstock economics; other feedstocks have also apparently experienced weakness more recently.

With October's weather much warmer than a year ago, propane deliveries for heating purposes would also be expected to have dropped from last year. These developments, combined with other indicators, suggest that underlying consumption of "other oils" was likely flat to down for the month.

SUPPLY [1]

Production

CRUDE PRODUCTION'S DECLINE CONTRASTS WITH NATURAL GAS. In a continuation of this year's more rapid decline, October's crude oil production dropped nearly 7 percent or more than one half million B/D from one year earlier. Lower 48 production fell an estimated 7.1 percent or nearly 430 thousand B/D. Alaskan production, maintaining that state's more recent decline trend, also fell at close to the same percentage rate, dropping 6.3 percent or nearly 130 thousand B/D.

Though crude oil production has been declining steadily since early 1986, natural gas output has experienced some recovery in the past several years. Marketed production of natural gas rose 6 percent from 1986 to 1988, with government estimates for 1989 showing steady output so far for this year.

Much of the increase has come from already-existing production capacity; however, natural gas drilling has also been showing some recovery. For the first three quarters of this year, API estimated gas completions were up about 13 percent, contrasting with oil completions' 29 percent drop. At least part of the 9 percent increase in well servicing during the third quarter is likely attributable to gas activity as well.

The rise in gas completions followed last year's nearly 8 percent increase, which, according to API's just-released *Survey on Oil and Gas Expenditures*, was one major reason that expenditures for drilling and equipping wells rose nearly 14 percent in 1988. Overall, upstream expenditures rose about 13 percent, with increases for the acquisition of undeveloped acreage and for enhanced recovery projects also contributing to the rise.

Imports

IMPORTS RISE BY TWO THIRDS IN FOUR YEARS. Though deliveries growth has slowed this year, imports have continued to increase because of declining domestic crude oil production. October's imports maintained the over-8 million B/D level of the past several months—raising the year-to-date average to nearly 8 million B/D as well. For the first ten months, total imports have increased by 9.4 percent from a year ago and by fully two thirds since 1985's same-period average of 4.8 million B/D.

A net inventory draw in that year and a net accumulation so far this year mean that actual import growth calculated for the period exceeded the underlying trend; even so, if inventory patterns had been the same for both years, imports still would have risen more than 50 percent over the past four years.

Despite the continued high level of imports overall in October, product imports again declined versus one year earlier, by 9.3 percent or more than 200 thousand B/D. Residual fuel oil imports dropped by about 130 thousand B/D to 472 thousand B/D, towards the lower end of the typical range for imports of that product in recent years.

Kerosine jet fuel imports also dropped by 80 thousand B/D, while distillate imports remained about even at approximately 330 thousand B/D. Imports of gasoline and blending components, however, were relatively strong, rising more than 100 thousand B/D to over 500 thousand B/D.

Refinery Operations

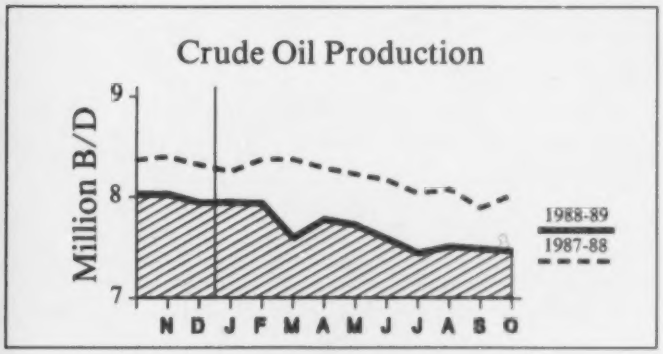
OPERATIONS DOWN FROM SEPTEMBER, UP FROM A YEAR AGO. The typical autumn downturn in refinery activity, delayed in September as input to distillation units remained at 14 million B/D, was evident in October. Input to distillation units was off by half a million B/D from the prior month—though still exceeding year-ago input by 1.7 percent. Utilization as traditionally calculated averaged nearly 87 percent for the month, while utilization of capacity in actual operation amounted to roughly 90 percent.

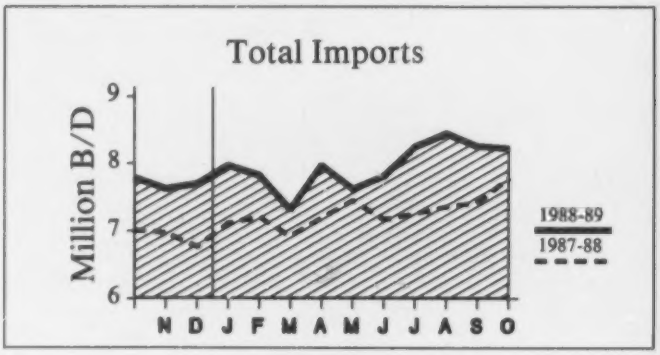
Gasoline production rose 0.9 percent, and distillate, 2.7 percent, over last October. Residual fuel oil output jumped nearly 16 percent, corresponding with temporary disruptions in product import sources following hurricane Hugo as well as downtime for some domestic conversion units.

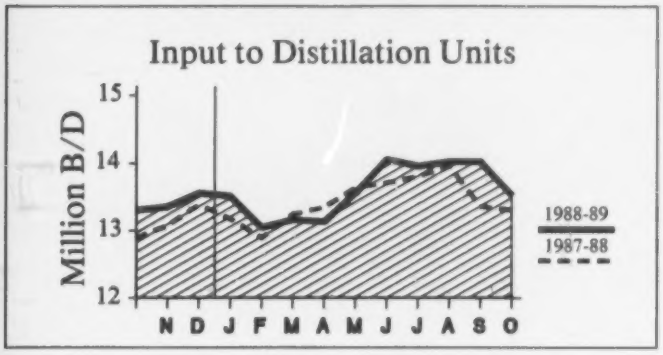
Inventories

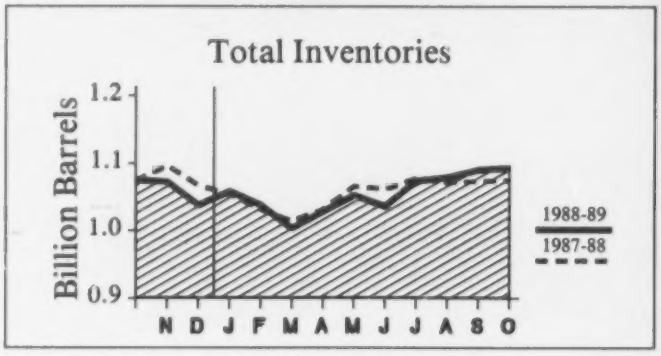
DISTILLATE'S DECLINE TYPICAL FOR OCTOBER. Total inventories rose 3 million barrels over the month, about average for October. Gasoline stocks dropped 2 million barrels; distillate inventories declined 3 million barrels, a decrease fairly typical for recent Octobers. Fall turnarounds, undertaken to prepare for higher distillate production in November and December, have typically reduced refinery operations early in the season when heating oil demand has already begun to rise.

The diminished role of inventories in heating season supplies of distillate in recent years has been evident in early-season inventory levels, which have trended downwards during the 1980s. This October's ending level of 120 million barrels, though down 8 million barrels from last October, was roughly equal to the recent-year October low of two years ago.









1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 578 million barrels as of October 31, 1989).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	OCTOBER			YEAR-TO-DATE		
	1989[1]	1988[2]	% Change	1989[3R]	1988[2]	% Change
Products Supplied:						
Total motor gasoline	7,247	7,271	(0.3)	7,311	7,332	(0.3)
Finished leaded motor gasoline*	636	1,283	(50.4)	868	1,375	(36.9)
Finished unleaded motor gasoline*	6,611	5,988	10.4	6,443	5,957	8.2
Naphtha-jet	252	214	17.8	210	210	-
Kerosine-jet	1,244	1,277	(2.6)	1,255	1,229	2.1
Distillate fuel oil	3,194	3,218	(0.7)	3,081	3,071	0.3
Residual fuel oil	1,099	1,343	(18.2)	1,300	1,327	(2.0)
All other oils[4]	4,178	4,354	(4.0)	4,114	4,127	(0.3)
Reclassified[5]	- 141	- 97	45.4	- 172	- 156	10.3
Total domestic products supplied	17,073	17,580	(2.9)	17,099	17,140	(0.2)
Exports	873	732	19.3	856	806	6.2
Total products supplied	17,946	18,312	(2.0)	17,955	17,946	0.1
Supply:						
Domestic production:						
Crude oil[6]	7,469	8,023	(6.9)	7,647	8,171	(6.4)
Natural gas liquids	1,544	1,661	(7.0)	1,585	1,620	(2.2)
Other supply[7]	793	864	(8.2)	933	892	4.6
Total domestic supply	9,806	10,548	(7.0)	10,165	10,683	(4.8)
Imports:						
Crude oil, total 10/	6,160	5,508	11.8	5,774	5,048	14.4
Canadian	567	654	(13.3)	614	681	(9.8)
Other	5,593	4,854	15.2	5,160	4,367	18.2
Products, total	2,068	2,279	(9.3)	2,198	2,241	(1.9)
Residual fuel oil	472	603	(21.7)	607	597	1.7
Other	1,596	1,676	(4.8)	1,591	1,644	(3.2)
Total imports	8,228	7,787	5.7	7,972	7,289	9.4
Total supply	18,034	18,335	(1.6)	18,137	17,972	0.9
Stock change, all oils	+ 88	+ 23	XXXX	+ 182	+ 26	XXXX
Refinery Operations						
Input to crude oil distillation units	13,526	13,304	1.7	13,599	13,445	1.1
Operable capacity	15,576	15,946	(2.3)	15,660	15,930	(1.7)
Refinery utilization (%)[8]	86.8%	83.4%	4.1	86.8%	84.4%	2.8
Crude oil runs	13,337	13,126	1.6	13,423	13,242	1.4

Stocks (millions bbls.)	1989		1988[2]	% Change from ...	
	Oct. 31[9]	Sep. 30[9]	Oct. 31	Previous Month	Year Ago
Crude oil 10/	342.5	334.4	339.6	2.4	0.9
Unfinished oils	111.1	105.2	109.0	5.6	1.9
Total motor gasoline**	222.2	224.3	217.7	(0.9)	2.1
Finished leaded motor gasoline*	20.1	21.7	38.7	(7.4)	(48.1)
Finished unleaded motor gasoline*	163.8	162.1	141.7	1.0	15.6
Naphtha-jet	6.0	7.0	6.3	(14.3)	(4.8)
Kerosine-jet	43.4	40.4	40.8	7.4	6.4
Distillate fuel oil	120.0	122.6	128.2	(2.1)	(6.4)
Residual fuel oil	49.8	44.9	42.5	10.9	17.2
All other oils	198.0	211.5r/	190.3	(6.4)	4.0
Total all oils	1,093.0	1,090.3r/	1,074.4	0.2	1.7

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-August, U.S. Department of Energy, September-October, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Field production of other hydrocarbons and alcohol, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.